

Comparison of Vaginal Cuff Closure Outcomes in Patients Having Robotic-assisted Total Laparoscopic Hysterectomy: V-Loc vs. Vicryl (Poster)

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Comparison of Vaginal Cuff Closure Outcomes in Patients Having Robotic-assisted Total Laparoscopic Hysterectomy: V-Loc vs. Vicryl

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Objective:

The purpose of this study is to determine if the use of V-Loc suture for vaginal cuff closure following robotic-assisted total laparoscopic hysterectomy decreased the incidence of vaginal cuff dehiscence compared to Vicryl suture.

Methods:

All patients who had completed robotic-assisted laparoscopic hysterectomy from 6/1/2008 to 12/31/2011 were identified through the institution’s database. Those patients who underwent vaginal closure with 2-0 V-Loc (unidirectional barbed suture) were retrospectively compared to the cohort that underwent vaginal cuff closure with 0-Vicryl (synthetic braided suture). Exclusion criteria included use of suture material other than 0-Vicryl or 2-0 V-Loc. The primary outcome measure was vaginal cuff dehiscence. Fisher’s exact test was used for data analysis.

Results:

Seven hundred thirty-two patients (328 in the 2-0 V-Loc group and 404 in the 0-Vicryl group) were analyzed. The incidence rate of vaginal cuff dehiscence among those with V-Loc suture was 0% (n=0/328), while it was 0.82% (n=6/404) among those with Vicryl suture (p=0.03568). There was no correlation identified between vaginal cuff dehiscence and type of uterine manipulator used, body mass index, smoking habits, uterine size or estimated blood loss.

Table 1. Data Analysis

Vaginal Cuff Dehiscence in RATLH: 6 patients											
	Date	Diagnosis	Suture	Uterine Manipulation	Age	EBL (cc)	Day to VCD	Trigger	BMI	Smoker	Uterus Wt (g)
1	2010	Benign	Vicryl	RUMI	46	25	32	Spont	22	No	382
2	2010	Malignant	Vicryl	EEA	55	50	36	Vaginal Instrumentation	21	No	190
3	2009	Malignant	Vicryl	EEA	54	20	62	Coitus	22	Yes	112
4	2010	Benign	Vicryl	RUMI	33	150	94	Coitus	34	Yes	132
5	2010	Malignant	Vicryl	EEA	29	50	98	Vaginal Instrumentation	31	No	75
6	2010	Benign	Vicryl	EEA	40	20		Spont	48	Yes	184

Table 2. Data Analysis

Other Variables Considered: Benign vs. Malignant Cases				
	V-Loc		Vicryl	
	Benign	Malignant	Benign	Malignant
No VCD	191	137	199	199
VCD: Vaginal Cuff Dehiscence	0	0	3	3

- p = 0.5852. No statistical significance with vaginal cuff dehiscence and benign vs. malignant cases (Fisher’s Exact test calculation).
- Dehiscence repairs were performed via vaginal and abdominal approach.

Table 3. Data Analysis

Secondary Variables Considered		
	Statistical Significance	p-value
Smoking	No statistical significance	p = 0.35
Uterine Weight	No statistical significance	p = 0.80
BMI	No statistical significance	p = 0.09
Uterine Manipulator	No statistical significance	p = 0.42
Coitus	No data for sexual activity in the no VCD groups	Cannot calculate
EBL	No statistical significance	p = 0.95

Conclusion:

- Dehiscence of the vaginal cuff after robotic-assisted total laparoscopic hysterectomy is a rare but important and serious complication in gynecologic surgery.
- The use of 2-0 V-loc unidirectional suture to close the vaginal cuff following robotic-assisted laparoscopic hysterectomy may eliminate the problem of vaginal cuff dehiscence.

Key Concept:

Novel Surgical Techniques

Measurable Learning Objectives

- To learn the incidence of vaginal cuff dehiscence following V-Loc and Vicryl suture.
- To identify a new technique for vaginal cuff closure using a unidirectional suture.

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